

**REMARKS**

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. § 1.111, and in light of the remarks which follow, are respectfully requested.

By the foregoing amendments, claim 1 has been amended to recite that the spunbonded nonwoven fabric comprises a fiber "having substantially no crimps", and that "wherein among the at least two olefin polymers constituting the fiber, the olefin-based polymer having the earliest induction period of strain-induced crystallization is contained in an amount of 1 to 30 wt% of the fiber". These amendments are supported by the specification, at least at page 14, lines 11 to 14, and page 15, line 22 to page 16, line 3. In addition, claims 8-15 have been canceled.

Upon entry of this amendment, claims 1 and 4-7 will be all the claims pending in the application.

**I. Response to Rejection under 35 U.S.C. §§ 102(e)/103(a)**

Claims 1 and 4-15 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,723,669 to Clark et al.

Applicants respectfully submit that the present claims are novel and patentable over Clark et al. for at least the following reasons.

Present claim 1 recites that a fiber having substantially no crimps. That is, the composition thereof is not unevenly distributed. On the contrary, the side-by-side cross-section fiber disclosed in Fig. 4A of Clark et al. has crimps since polymer A and polymer B are not evenly distributed.

Moreover, in the fiber recited in present claim 1, the olefin-based polymer having the earliest induction period of strain-induced crystallization is contained in an amount of 1 to 30 wt% of the fiber, which is not disclosed in Clark et al. As described at page 15, line 22 to page 16, line 10 of the present specification, the presently claimed invention can provide superior results in terms of spinning property and extensibility of the resultant fiber, by employing different polymer components in the specified composition ratio.

It was asserted at pages 2-3 of the Office Action, that:

As to claims 1 and 5 - 7, CLARK et al. discloses multicomponent spunbond fibers and webs made from them. Clark et al. teach the use of various cross-sectional configurations such as side-by-side (column 3, lines 30 - 35). Specifically, in adapted Figure 4A, the side-by-side configuration is shown below. As shown in adapted Figure 4A, the fiber is a conjugate fiber (having two different components) and the center point as required by Applicant is shown in the center of the fiber cross-section. Point A and point B are symmetric about the center point and the composition at points A and B would be the same since they are both on the center line of the side-by-side cross-section.

Applicants respectfully disagree.

First, point A can be selected arbitrarily from the cross section; however, it should not be selected as a point on the borderline of A and B regions since the components on the borderline cannot be defined.

Second, point A should be selected arbitrarily. In the case of Figure 4 described in Clark et al., if a point A is selected from the region A, a point symmetric about the center point is in the region B. That means that compositions at points A and B are different from each other, which does not meet the requirement of present claim 1.

It was further asserted that:

The reference teaches combinations of polymer components that include polyolefin/polyolefin such as polypropylene/polypropylene ... The reference also teaches that the multicomponent fibers can comprise a first component comprising a substantially crystalline polypropylene and the second component can comprise an amorphous polypropylene, that is to say a polypropylene polymer having a lower degree of crystallinity.

(page 4, last paragraph of the Office Action).

The Examiner also quoted a conjugate fiber disclosed in Clark et al. Applicants respectfully submit that the “conjugate fiber” described in Clark et al. is completely different from that used in the present application since the “conjugate fiber” of Clark et al. uses amorphous polypropylene. On the contrary, the conjugate fiber recited in the present claims should have induction periods of strain-induced crystallization, which is a phenomenon that only a crystalline resin shows.

As the Examiner notes, the conjugate fiber disclosed in Clark et al. is a combination of crystalline polypropylene and amorphous polypropylene that does not have a melting point. For at least this reason, the conjugate fiber disclosed in Clark et al. does not exhibit a difference in induction periods of strain-induced crystallization.

It was also asserted that the property that the components of the claimed polymer has a difference in induction periods of strain-induced crystallization of 100 seconds or longer, is inherent to the polyolefin/polyolefin combinations described by Clark et al. The Examiner also contended that the presumption is supported by the use of like materials. See page 4, last paragraph of the Office Action.

Applicants again respectfully disagree. As set forth above, the conjugate polyolefin/polyolefin fiber disclosed in Clark et al. does not have the property recited in present claim 1, because the conjugate is a combination of crystalline polyolefin and amorphous polyolefin.

As described in Example 11 of the present specification, the two polymer components in a fiber have the same MFR; however, they have different induction periods of strain-induced crystallization (see Table 3). That is, the induction periods of strain-induced crystallization are not correlated to MFR or degree of crystallinity. In other words, a

different combination of MFR and degree of crystallinity does not necessarily result in difference in induction periods of strain-induced crystallization.

Further, Clark et al. does not disclose that a difference in induction periods of strain-induced crystallization is 100 seconds or longer. Moreover, as shown in Comparative Example 11 and other examples in Table 4 of the present specification, a conjugate polymer not having a difference in induction periods of strain-induced crystallization of 100 seconds or longer is inferior in terms of fuzz resistance.

The Examiner contended that the Declaration under 37 C.F.R. § 1.132, filed July 17, 2007, is insufficient to overcome the rejection (page 6, last paragraph of the Office Action). Applicants advise that, as set forth above, the side-by-side cross-section fiber of Clark et al. has crimps as in the eccentric sheath-core cross-section of the Declaration.

In view of the foregoing, Applicants respectfully submit that the present claims are not anticipated or rendered obvious by Clark et al. and thus the rejection should be withdrawn.

## II. Conclusion

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (202) 452-7932 at his earliest convenience.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: December 14, 2007

By: \_\_\_\_\_



Fang Liu, Ph.D.  
Registration No. 51283